

## CLAIMS

1       1. A method of monitoring a filter for absorbing paint particles produced  
2       during spray painting with a spray gun in a paint spray booth coupled to an  
3       exhaust pump, said method comprising the steps of:

4               installing a filter between the booth and exhaust pump;

5               determining the initial pressure drop across a filter prior to use of the  
6       spray booth;

7               determining the maximum allowable pressure drop for the filter prior to  
8       the requirement that spraying activities must be terminated by adding the initial  
9       pressure drop of the filter to the maximum allowable increase in pressure drop  
10      across the filter before the of spraying activities must be terminated;

11              providing a warning when a first portion of the maximum allowable  
12       pressure drop is reached; and

13              preventing the use of the spray gun when a second portion, greater  
14       than the first portion, of the maximum allowable pressure drop is reached.

1       2. The method as set forth in claim 1 wherein the spray gun is  
2       pneumatically powered by pressurized air via a line having a solenoid valve  
3       mounted therein for controlling the airflow there through coupled to the spray  
4       gun, said step preventing the use of the spray gun when a second portion,  
5       greater than the first portion, of the maximum allowable pressure drop is  
6       reached includes the step of actuating the solenoid valve to the closed  
7       position cutting off airflow to the spray gun.

1       3. The method as set forth in claim 2 wherein the pressure drop is  
2       measured by means of first and second pressure sensors positioned on either  
3       side of the filter.

1       4.     The method as set forth in claim 3 wherein the first portion is 80 percent  
2     of the maximum allowable pressure drop and the second portion is 90 percent  
3     of the allowable pressure drop.

1       5.     The method as set forth in claim 4 wherein the pressure transducers  
2     are connected to a computer with a display terminal, the method including the  
3     step of monitoring the pressure drop across the filter on the display terminal.

1       6.     The method as set forth in claim 5 including the step of sending an  
2     alarm signal to the computer and displaying the alarm signal on the display  
3     terminal.